

REMARKS

Claims 1, 3, 4, 6-11 and 13-20 are pending in this application, claims 11 and 13-20 having been withdrawn from consideration. By this Amendment, claims 1 and 6 are amended, and claim 5 is canceled without prejudice to or disclaimer of the subject matter set forth therein. Support for the amendments to claims 1 and 6 can be found in the specification as originally filed, for example, at page 13, line 19 - page 14, line 1; page 15, lines 16-19; and page 16, lines 22-24; and in claims 1 and 6 as originally filed. No new matter is added by these amendments.

I. Claim Objections

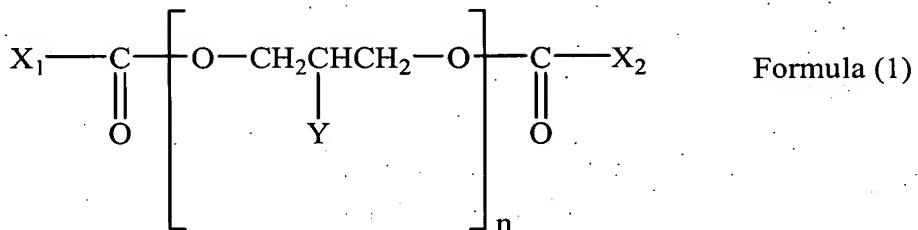
The Office Action objects to claims 5 and 6 under 37 C.F.R. §1.75(c), as being in improper dependent form for failing to further limit the subject matter of a previous claim. While Applicants do not necessarily agree with these objections, claim 5 is canceled herein and claim 6 is amended to more clearly set forth the additional limitation therein. Accordingly, reconsideration and withdrawal of the objections is respectfully requested.

II. Claim Rejections Under 35 U.S.C. §103

The Office Action rejects claims 1, 5-7, 9 and 10 under 35 U.S.C. §103(a) over Japanese Patent Application Publication No. 10-301332 to Serizawa et al., in light of page 12, line 8 of the instant specification, and Grant & Hackh's Chemical Dictionary, page 169, in combination with Diamond, HANDBOOK OF IMAGING MATERIALS, page 169. The Office Action rejects claims 3 and 4 under 35 U.S.C. §103(a) over Serizawa, in light of the instant specification, Grant & Hackh's and Diamond, as applied to claim 1, and in further combination with additional teachings in Serizawa. The Office Action rejects claim 8 under 35 U.S.C. §103(a) over over Serizawa, in light of the instant specification, Grant & Hackh's and Diamond, as applied to claim 1, and in further combination with additional teachings of

Diamond at pages 168-169. Applicants respectfully traverse these rejections with respect to claims 1, 3, 4, and 6-10, claim 5 having been canceled herein.

Independent claim 1 sets forth, in pertinent part, an "image forming toner comprising at least a binding resin, a colorant, a charge controlling agent, and a polyglycerol ester compound represented by the following formula (1):



wherein in formula (1), X_1 and X_2 each independently represent an aliphatic hydrocarbon having 9-39 carbon atoms; and Y represents OH or OCOX_1 ; wherein an esterification ratio of the polyglycerol ester compound is 50% or higher and a polycondensation degree n of the polyglycerol is an integer from 9 to 30; and wherein the binding resin comprises at least a polyester resin having terephthalic acid and an ethylene oxide adduct of bis-phenol A as constituent monomers." Claims 3, 4 and 6-10 depend, directly or indirectly, from claim 1 and include all of the limitations thereof.

Serizawa discloses a toner composition that includes a styrene-n-butylacrylate-acrylic acid binder resin, a carbon black colorant, and a releasing agent that is an ester of either a higher alcohol having 12-30 carbon atoms or of a higher fatty acid having 12-30 carbon atoms. *See Serizawa, Abstract; paragraphs [0013], [0024], [0028], [0030]-[0033].* In particular, Serizawa discloses as a releasing agent "deca stearin acid decaglyceryl," which is properly translated as "deca stearic acid decaglyceryl" or decaglyceryl decastearate, a polyglycerol ester having an esterification ratio of 75% and a polymerization degree of 10. *See Serizawa, paragraph [0033].* Based on these teachings, the Office Action takes the position that, because Serazawa teaches toners including styrene-n-butylacrylate-acrylic acid

binder resin, a carbon black colorant, and a deca stearic acid decaglyceryl releasing agent, the claimed toner would have been obvious.

However, Serizawa does not disclose or suggest binding resins that include a polyester resin with constituent monomers of terephthalic acid and an ethylene oxide adduct of bis-phenol A, or the advantages that can be obtained by combining such resins with the specific polyglycerol ester compounds of claim 1. *See generally* Serizawa. Rather, Serizawa discloses a broad range of thermoplastic binding resins, and teaches that vinyl systems are preferred. *See* Serizawa, paragraphs [0024]-[0025].

In contrast, independent claim 1 requires both a binding resin that "comprises at least a polyester resin having terephthalic acid and an ethylene oxide adduct of bis-phenol A as constituent monomers" and a polyglycerol ester compound according to formula (1). This combination allows toner particles with improved image density characteristics to be achieved. As can be seen from the Examples in the instant specification, toners meeting the limitations of claim 1 (that is, having binding resins and polyglycerol ester compounds meeting the above limitations) produced images having image densities of at least 1.3, a superior rating. *See e.g.*, Specification, page 16, line 21 - page 17, line 13; page 19, lines 19-23; page 20, lines 12-25; page 21, line 15 - page 22, line 14.

Toner compositions according to Serizawa, however, do not have binding resins and polyglycerol ester compounds meeting the limitations of claim 1. Applicants have reproduced toners according to Serizawa and tested the image densities of these toners. *See* Declaration of Yasuhige Nakamura (attached). Mr. Nakamura reproduced the toner of Serizawa's Example 4, to illustrate a typical Serizawa toner. *See* Declaration, page 2, line 1 - page 6, line 10. Using the methods of the instant specification, this Serizawa toner was used to produce an image, for which the image density was measured to be 1.10. *See* Declaration, page 6, lines 12-21. However, toners that provide images with densities of 1.10 or less are

not practically usable. *See* Declaration, page 6, lines 22-23. Thus, the toners of Serizawa produce images lacking adequate image density, and therefore cannot provide the benefits of toners meeting the limitations of claim 1.

Thus, Serizawa alone cannot support a rejection of independent claim 1 or its dependent claims 3, 4 and 6-10. However, no combination of Grant & Hackh's, Diamond or the cited page 12, line 8 of the instant specification remedies this shortcoming of Serizawa.

The secondary references are each cited for specific teachings. Grant & Hackh's is cited as confirming disclosures of Serizawa relating to the releasing agent decaglyceryl decastearate. Diamond is cited for its teachings relating to charge control additives and known coloring agents. The specification is cited as confirming that carbon black colorants are light absorbing materials. None of these references, including the instant specification's discussion of light absorbing materials, discloses or suggests the combination of the claimed binder resin and the claimed polyglyceryl ester compound. The secondary references also do not teach or suggest the superior image density characteristics that can be obtained by the claimed combination. Thus, no combination of Serizawa and the secondary references, Grant & Hackh's, Diamond or the cited page 12, line 8 of the instant specification, can support a rejection of claims 1, 3, 4 and 6-10.

For at least these reasons, Applicants respectfully submit that claims 1, 3, 4 and 6-10 are patentable over Serizawa, Grant & Hackh's, Diamond and the cited page 12, line 8 of the instant specification, individually and in combination. Accordingly, reconsideration and withdrawal of the rejections are respectfully requested.

III. Conclusion

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of claims 1, 3, 4, 6-11 and 13-20 are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance; the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



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